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ABSTRACT

This paper describes developments and uses of the Educational Technologies Center at Tennessee Technological University since its inception. The goal of the Educational Technologies Center is to generate interest and provide support for the use of technologies to support instruction. The Ed Tech Center is a separate entity from the computer center. Since the Ed Tech Center opened, there has been a large increase in the level of electronic presentation activities at the departmental level. Many departments have their own equipment, and have trained people to do desktop publishing in their offices. Results of the implementation of the Ed Tech Center include: (1) high usage of color transparencies; (2) case study videos; (3) computer controlled slide shows; (4) color scanning; (5) VHS film editing; (6) color prints; (7) color slides; and (8) support for getting other funding. The Ed Tech Center also plans to create an interactive, CD-ROM based program to test a student's skill level in certain subject areas. (Author/SWC)

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An Integrated/Multidivisional Approach to Instructional Multimedia Development

Mid-South Instructional Technology Conference
Middle Tennessee State University
April 2, 1996

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History of TTU Educational Technologies Center

A. 1992-93
- VP for Academic Affairs forms Instructional Technologies Ad Hoc Committee
- Committee solicits project proposals
- Committee recommends spending $31,000 for large screen projection systems (establishing sites for scheduled use of instructional technologies)
- Funds provided to establish an Educational Technologies Center
- Computer Center Director funds hardware, software, and student salary

B. Goal is to provide spark to ignite excitement/interest and provide support for use of technologies to support instruction

C. The Educational Technologies Center
- Politics involved
- must be separate activity from the Computer Center
- must find location where will the Center be housed (Library provided site)
- funding
- staffing
  - Academic Computing Support Manager coordinates
  - Student funds used for hiring a student multimedia specialist
- Getting it going
  - cleaning out the "store room"
  - using previously unused Library videoequipment
  - bringing over the very low usage Computer Center film recorder

D. Immediate results
- high usage of color transparencies
- case study videos
- computer controlled slide shows
- color scanning
- VHS film editing
- color prints
- color slides
- support for getting other funding

"The College of Business has been awarded a $99,000 grant from the TVA to establish multimedia training center. This project will make great contributions to the regional business community. The Educational Technologies Center was instrumental in being able to pursue the grant. Last fall, I allocated a portion of my time every week to discovering how I could use technology in my classes. While working with Billy Tindall (the multimedia specialist at the center), the spark came for the idea to start a center to use this technology in business training. We both could see the synergism of additional technology in the classroom. After working closely with the head of the College of Business on funding sources, and Mr. Gold

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on capabilities and equipment needs, and the research office on grant issues; the proposal was submitted.

... And, I would like to acknowledge that the spark for the TVA multimedia center came from working with Billy Tindall and Jeff Gold."

-Kevin Liska, Director of the TTU Business Media Center

Since the Ed Tech Center opened, there has been an enormous increase in the level of electronic presentation activity at the departmental level. Originally, the Center's color inkjet printer was almost the only one on campus. We printed hundreds of transparencies a year. Now, many departments have their own color printers and can print their own graphics. Many faculty member-~ now have computers in their own offices that are capable of creating electronic slide shows for classroom lectures or for presentations. Microsoft PowerPoint, WordPerfect Presentations, and Lotus Freelance are the most popular. And most departments now have some type of equipment in one or more of their classrooms that are capable of displaying these graphics. Some have permanently-mounted 3-gun projectors. Some opted for multimedia carts complete with computers, CD-ROM drives, visual presenters, and VCRs attached to 27-inch display monitors that can be rolled from classroom to classroom. Still others have portable color LCD display units, either panels that fit on top of an overhead projector or self-contained units capable of displaying data or video with stereo sound.

A great deal of time used to spent working with faculty and departmental staff members to produce materials for publication. Now most departments have trained people to do most of their desk top publishing in their own offices. The computer center staff used to handle the film recorder, but there was no one who had the time to really learn all of its capabilities and its shortcomings, so there was no one to coach faculty and students through the process. Now that this equipment is housed in the EdTech Center, it is being used constantly. Faculty and students are counseled on such things as content, layout, and design, pointing out which color schemes work well under certain lighting conditions, what the shortfalls of the software and hardware may be, and so forth. The break-even point cost-wise between color transparencies and 35mm slides for our campus is about 5. Transparencies cost about $3.00 each, and a roll of slide film with developing runs about $15 - $16. The same quality graphics can be put on either. Of course, the slides do have much higher resolution that 300 dpi transparencies.

Most clients have their film developed on-campus at Photographic Services. Photo Services generally develop slides twice each week, meaning that clients almost never wait more than 2 or 3 days to get their slides. Most other places send the film out of town for about a 2-week turnaround. And Photo Services will, for a higher price, develop and mount slides in one day.

Many departments, notably Biology and Cooperative Fisheries, use slides constantly. Departments such as these have developed their own local experts who assist other faculty and students in developing their materials to be printed to slide film.

Some of the student employees have been trained in how to not only operate the film recording equipment but also in how to help the clients develop their materials. All of these things help to free up more of the multimedia specialist's time so that he can manage larger projects.

More faculty are using presentation software in the classroom and for professional development. Other faculty members see this and decide to try it out for themselves. They also see this technology at conferences and on the World Wide Web.

With the creation of the Instructional Technology Roundtable, faculty see increased support for their ideas for using technology in the classroom in the University Administration. They are feeling more comfortable in expressing their creative ideas with myself and with their colleagues. Even the old "fuddy-duddies" who don't like to change anything are beginning to see the advantages of not being left behind on the old chalkboard. They are getting bold enough to suggest what they might like to do, knowing that they won't be belittled. They are beginning to let their imaginations get into their classroom preparations. The Center can even take something like this photographic of the University Library and something like this pencil drawing of the Library and make this morphing sequence into a digital video clip.

The Center is now doing larger video productions. They are producing career tapes for Basic Business -- short segments and interviews with faculty, students, and alumni of the various departments within the College of Business -- which will be used to help freshmen Basic Business students decide on a major. Tapes being produced for University 105 give sample lectures from various professors in different departments and colleges to expose freshmen to different styles of lecturing.

The Academic Development Program wrote skits that used student/faculty interactions to illustrate their methods of dealing with students taking remedial coursework.

These skits were videotaped and shown at a prominent conference as part of their overall presentation.

They are doing more tapings that involve combining both electronic and photographic slides, analog and digital video, multiple sound tracks with voice and music overlays, and extensive use of titling and other post-production effects.

They have just received our CD-Recorder equipment,and they already have several projects awaiting production. The Library Archives has hundreds of very old photographs from a local studio that has been out of business for decades. These images are decaying with each passing day and need to be preserved as they are almost the sole photographic record of local historical events and landmarks. The Library staff spend countless hours providing tours to incoming students. This orientation could be designed into an interactive CD-ROM-based program for a kiosk or for use on any of the campus networked computers.

The new Dean of the College of Arts and Sciences has said that all incoming freshman in that college must have a certain competency level in such areas as word processing, database manipulation, and other basic computer skills. These basic skills are taught in a course called Computer Science 110 which is primarily taken by upper classmen. Requiring this as an entry-level course could completely swamp the departmental faculty. The Center is going to create an interactive, CD-ROM-based program to test a student's skills in these areas. This program could be made available securely on any campus networked computer with the results of the testing be convey it more effectively in a classroom environment.

For example, seismic codes have specific provisions regarding geometric or vertical irregularities in buildings. These irregularities might induce torsion in a structure due to unsymmetrical building shapes. The conveying of this concept is very important in the context of seismic design or structural dynamics. Yet it is extremely difficult to convey on a blackboard. The Interactive Seismic Database may be used as a tool by the professor to demonstrate -- using actual damage photographs -- the importance of avoiding these geometric or vertical discontinuities in structures. Also, similar structures that responded differently to a seismic event can be studied. Likewise, the students could be assigned the task of using the ISD to investigate damage resulting from torsional forces on irregularly shaped structures and provide methods of construction that could have been used to prevent the damage. In this way the student begins to understand the theory of structural dynamics, the principles behind code restrictions, and the ramifications of their decisions on real buildings.